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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,550	04/01/2004	Christian L. Belady	200311050-1	9978

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EXAMINER

CHERVINSKY, BORIS LEO

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/816,550	Applicant(s) BELADY ET AL.	
	Examiner Boris L. Chervinsky	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-24 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 19, 21 are objected to because of the following informalities:
typographical errors in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7, 8, 10-12, 14, 15, 17- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Wei.

Wang discloses a thermal dissipation system, comprising: a plurality of thermal members 20 having surfaces adapted for transferring heat from heat generating elements such as processors 14 (col.2, lines 55-57); a heat sink 22; and a plurality of heat pipes 18, each of the heat pipes coupled between a respective one of said plurality of thermal members 20 and said heat sink 22, the heat sink 22 is a finned heat sink; a fan 24 disposed proximate to said heat sink. The method steps of claims 7, 8, 11 and 12 are necessitated by the device structure.

Wang discloses the claimed invention except flexibility of heat pipes bends to provide such flexibility. Wei discloses the plurality (col. 4, lines 25-32) of flexible heat pipes 10 having several bends providing flexibility. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use flexible heat pipes

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of different length as disclosed by Wei in the structure disclosed by Wang to cool a plurality of components in different locations.

3. Claims 6, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Wei and further in view of Cowans.

Wang in view of Wei discloses the claimed invention except refrigeration-based unit to cool the heat sink. Cowans discloses the refrigeration unit connected to the condensing portion of the heat pipes. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use refrigeration-based unit as disclosed by Cowans for cooling the heat sink as disclosed by Wang for sufficient cooling of the plurality of heat generating components.

4. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Wei and further in view of Oikawa et al.

Wang in view of Wei discloses the claimed invention except a power supply coupled to the heat sink. Oikawa discloses the heat pipe and the heat sink and the power supply coupled to the heat sink. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to couple the power supply to the heat sink as disclosed by Oikawa et al. in the device disclosed by Wang for cooling the power supply.

5. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Wei and further in view of Oikawa et al.

Wang discloses the claimed invention as shown above for claims 1 and 14 except the power supply coupled to the heat sink. Oikawa discloses the heat pipe and the heat sink

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and the power supply coupled to the heat sink. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to couple the power supply to the heat sink as disclosed by Oikawa et al. in the device disclosed by Wang for cooling the power supply. The various vertical profiles of the heat generating components are common in electrical circuits therefore obvious.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris L. Chervinsky whose telephone number is 571-272-2039. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2800 ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BORIS CHERVINSKY
PRIMARY EXAMINER

Boris L. Chervinsky
5/19/5